

EXECUTIVE SUMMARY

This NASA Ames Development Plan Final Programmatic Environmental Impact Statement (EIS) has been prepared for the National Aeronautics and Space Administration (NASA). The purpose of this report is to assess the environmental consequences associated with development under the proposed NASA Ames Development Plan (NADP), which is intended to bring new research and development uses to the NASA Ames Research Center (ARC) in Santa Clara County, California. This EIS has been prepared pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 *et seq.*), and according to the Procedures for Implementation of NEPA for NASA (CFR Title 14 Part 1216 subpart 1216.3).

As required by federal law, this summary presents an overview of the analysis contained in the EIS. NEPA requires that this chapter summarize major conclusions of this EIS, including: 1) project and alternatives; 2) areas of controversy; 3) significant impacts; 4) unavoidable significant impacts and 5) implementation of mitigation measures.

The last section of this Executive Summary includes a summary of changes made to the Draft Programmatic EIS to create this Final Programmatic EIS.

A. Project and Alternatives

1. Study Area

The Study Area consists of approximately 600 hectares (1,500 acres) of land, or almost all of the land under NASA's control within Ames Research Center. ARC is located on approximately 800 hectares (2,000 acres) of land between Highway 101 and the southwestern edge of the San Francisco Bay in the northern portion of Santa Clara County. The Study Area is divided into four sub-areas, as shown in Figures 1-3 through 1-7:

- **NASA Research Park:** an 86-hectare (213-acre), roughly triangular site located between the airfield, Highway 101, and the original Ames Research Center campus. This area includes most of the Shenandoah Plaza National Historic District, except Berry Court and Hangars 2 and 3. Current uses in the NASA Research Park (NRP) area include office space, retail and

business services, airfield operations, vehicle maintenance, research facilities and storage, some of which are used by the Army Reserve, Department of Defense Commissary and Exchange, and the Air National Guard. The existing buildings within the NRP area contain approximately 150,000 square meters (1.6 million square feet) of space.

- **Eastside/Airfield:** a 385-hectare (952-acre) site comprised of the airfield and the lands to the east of it. Current uses include the golf course, Hangars 2 and 3, and the airfield operations, fueling, and munitions storage facilities of the California Air National Guard (CANG). The existing buildings within the Eastside/Airfield area contain approximately 80,000 square meters (860,000 square feet) of space.
- **Bay View:** a 38-hectare (95-acre) site immediately north of the original Ames Research Center campus. This land is predominantly undeveloped upland grassland containing a few research facilities such as the Outdoor Aerodynamic Research Facility.
- **Ames Campus:** the original 94-hectare (234-acre) site of Ames Research Center. This area was referred to as the Existing ARC Facilities in the Notice of Intent filed in June 2000, and in scoping meetings held in July 2000. Current uses in the Ames Campus area include office, research and development, and storage. The existing buildings in the Ames Campus area contain approximately 268,000 square meters (2.89 million square feet) of space.

2. Project Alternatives

This EIS evaluates five alternatives for new development in ARC under the NADP, as summarized in Table 2.1:

- **Alternative 1: The No Project Alternative.** Under the No Project Alternative, no new development would be proposed for Ames Research Center at this time. However, NASA would implement several projects already approved, as described in Chapter 2, so that “No Action,” the typically-employed term under NEPA, would not accurately describe the baseline condition. In addition, “No Project” is the CEQA equivalent of

“No Action” and so very familiar to the public reading the document. Thus Ames Research Center staff have determined that this alternative should be referred to as “No Project” rather than “No Action” in order to minimize confusion for the public.

- **Alternative 2.** Alternative 2 proposes to develop approximately 363,000 square meters (3.9 million square feet) of new space in the NRP, Bay View, and Eastside/ Airfield areas. Within the NRP area, there would be approximately 192,000 square meters (2.1 million square feet) of new educational, office, research and development, museum, conference center, housing and retail development, approximately 52,000 square meters (560,000 square feet) of existing non-historic structures would be demolished, and approximately 46,000 square meters (500,000 square feet) of existing space would be renovated. Alternative 2 proposes approximately 121,000 square meters (1.3 million square feet) of new educational and housing development in the Bay View area, and approximately 51,000 square meters (550,000 square feet) of new low-density research and development and light industrial space, in addition to the renovation of Hangars 2 and 3, in the Eastside/Airfield area. Total build out¹ under this alternative would be approximately 845,000 square meters (9.1 million square feet). Alternative 2 would generate 13,068 new employees, approximately 2,600 students, and house 2,010 residents in 738 housing units within the study area.
- **Alternative 3.** Based on the ideas of Traditional Neighborhood Design, Alternative 3 would create a new mixed-use development within the NASA Research Park area. Alternative 3 proposes the addition of approximately 284,000 square meters (3 million square feet) of new educational, office, research and development, museum, conference center, housing and retail development, the demolition of approximately 52,000 square meters (560,000 square feet) of non-historic structures, and the

¹ The total amount of square footage of space at the Ames Research Center once all of the construction and demolition associated with this Alternative were complete.

renovation of approximately 46,000 square meters (500,000 square feet) of existing space. Alternative 3 does not propose any new construction in the Bay View or Eastside/Airfield areas, although Hangars 2 and 3 in the latter area would be renovated for low-intensity research and development or light industrial uses. The total build out under this alternative would be approximately 760,000 square meters (8.2 million square feet). Alternative 3 would generate 11,047 new employees, approximately 2,600 students, and house 1,267 residents in 488 housing units within the study area.

- **Alternative 4.** Alternative 4 would concentrate more of the new development in the Bay View area than would the other alternatives, while creating less dense development in the NRP area. Alternative 4 proposes the addition of approximately 145,000 square meters (1.6 million square feet) of new educational, office, research and development, museum, conference center, housing and retail space in the NRP area, as well as the demolition of approximately 52,000 square meters (560,000 square feet) of non-historic structures and the renovation of approximately 46,000 square meters (500,000 square feet) of existing space. Alternative 4 also proposes approximately 251,000 square meters (2.7 million square feet) of new office, research and development, laboratory, educational, and student/faculty housing development in the Bay View area. In the Eastside/Airfield area, Alternative 4 proposes approximately 62,000 square meters (670,000 square feet) of new light industrial, research and development, office and educational facility development, as well as the renovation of the historic hangars. The total build out under Alternative 4 would be approximately 940,000 square meters (10.1 million square feet). Alternative 4 would generate 15,599 new employees, approximately 2,500 students, and house 2,574 residents in 914 housing units within the study area.
- **Alternative 5.** Under Alternative 5, there would be some new construction in each of the four development areas, but it would be concentrated primarily in the NRP area. Alternative 5 proposes the addition of approximately 192,000 square meters (2.1 million square) feet of new educational, office, research and development, museum, conference

center, housing and retail space in the NRP Area, as well as the demolition of approximately 52,000 square meters (560,000 square feet) of non-historic structures and the renovation of approximately 56,000 square meters (600,000 square feet) of existing space. It also proposes the addition of approximately 93,000 square meters (1 million square feet) of new development in the Bay View area, primarily for housing. In the Eastside/Airfield area, Alternative 5 proposes the construction of approximately 1,100 square meters (12,000 square feet) of new space in a new control tower. Finally, in the Ames Campus area, Alternative 5 includes the demolition of approximately 37,000 square meters (400,000 square feet) of existing buildings to make way for 46,000 square meters (500,000 square feet) of high density office and research and development space. Total build out under Alternative 5 would be approximately 777,000 square meters (8.4 million square feet). Alternative 5 would generate 7,222 new employees, approximately 3,000 students, and house 2,808 residents in 1,040 housing units within the study area.

NASA has selected Mitigated Alternative 5 as the Preferred Alternative. The Preferred Alternative has been identified as the option that best meets NASA's purpose and need. Mitigated Alternative 5 would generate 7,088 new employees, approximately 3,000 students, and house 4,909 residents in 1,930 housing units.

3. Project Purpose and Need

Proposed development under the NASA Ames Development Plan (NADP) would further NASA's mission by providing the critical mass of scholars and engineers necessary to create a vital research and educational community focused on the advancement of human knowledge about space, the Earth, and society. Under the NADP, the research and educational community at NASA Ames would consist of federal agencies, universities, private industry and non-profit organizations.

A secondary purpose of the project is to allow for on-going stability throughout ARC, an enhancement of its research capabilities, and efficient use of its land.

By integrating public and private research and development efforts, the expanded Ames Research Center would serve as a hub of technology transfer. Collaboration with NASA's development partners would keep ARC's researchers involved in cutting-edge technology advances in Silicon Valley, the San Francisco Bay Area and beyond, and promote commercial applications of the basic scientific research done at Ames Research Center.

B. Areas of Controversy and Issues Identified During Scoping

Over the past decade, there has been significant public concern over the future of Ames Research Center at Moffett Field. Residents of the City of Sunnyvale and the City of Mountain View have been particularly concerned due to their close proximity to ARC.

In 1996, NASA considered allowing the Air Force to host commercial air cargo members of the Department of Defense's (DOD) Civil Reserve Air Fleet (CRAF) at Moffett Field to augment DOD military airlift needs with civil air carrier resources, and to reduce NASA's net costs for operating the airfield. The result was great opposition from surrounding communities and the withdrawal of NASA's plan. In November 1996, the neighboring cities of Mountain View and Sunnyvale appointed a 19-member Citizens Advisory Committee (CAC) to study and provide input to NASA about the best uses of Moffett Field. The Director of Ames Research Center, Dr. Henry McDonald, led the development of NASA's six point initiative, which outlined program goals and reuse concepts for the development of the former Navy base. After extensive public outreach and numerous public meetings, the Final Report of the Community Advisory Committee endorsed NASA's six point initiative.

Ames has continued to work with the neighboring communities in preparing its preferred development plan. On December 8, 1998, NASA unveiled its visionary concept for a shared-use R&D and education campus. This planning process has continued since then, and is now culminating in the NADP. In July 2000, a series of public scoping meetings were held for the Environmental Impact Statement. Particular areas of concern identified during the scoping meetings included the following:

- **Traffic:** Local residents have been concerned about the impacts of additional development at ARC on local and regional traffic conditions.
- **Air Quality:** Local residents and the Bay Area Air Quality Management District have been concerned about potential air quality impacts resulting from new development and the traffic it generates.
- **Noise:** Local residents have been concerned about noise from ARC, particularly related to wind tunnel and airfield operations.
- **Burrowing Owls:** Wildlife officials and advocates have voiced concerns about the impact on burrowing owls of additional development at ARC.
- **Wetlands:** ARC and its vicinity include wetlands, and local residents and employees have been concerned about potential impacts on these sensitive areas.
- **Recreational Space:** ARC employees have voiced concern about losses of recreational space that would result from new development under the NADP.
- **Historic Resources:** ARC has one historic district, the Shenandoah Plaza Historic District. In addition, there are other historic buildings in the Ames Campus area, most notably the wind tunnels described in Section 3.13. Historic preservationists have been concerned about possible impacts on these historic resources.
- **Hazardous Materials:** ARC is the site of existing hazardous material contamination. Community members and employees have expressed

concerns about possible exposure of new workers and residents to these hazardous materials.

- **Airfield Operations:** Some community members have voiced a desire that the ARC airfield be designated for possible civilian use and increased operations, while others have suggested reductions in or elimination of aircraft operations. While the NADP would not affect the airfield in any way, this issue continues to be controversial in the community.

C. Potential Areas of Significant Impact

Implementation of the NADP has the potential to generate environmental impacts in a number of areas. Impacts in the following areas could be significant without the implementation of mitigation measures, but most would be reduced to a less-than-significant level if the mitigation measures recommended in this report were implemented:

- " Traffic
- " Air Quality
- " Infrastructure
- " Services
- " Hazardous Materials
- " Geology
- " Biology
- " Noise
- " Aesthetics
- " Recreation
- " Cultural Resources
- " Socio-Economics

D. Mitigation Measures

This EIS suggests specific mitigation measures that would reduce most impacts identified above to less-than-significant levels, as summarized in Table O-1.

E. Unavoidable Significant Impacts

The significant and unavoidable consequences that would occur with implementation of the Preferred Alternative:

CIR-1: Implementation of the proposed project would increase vehicle trips and traffic congestion on segments of Highways 101, 85, and 237 in the immediate vicinity of the Ames Campus, as well as on highway segments outside the local study area. On all nearby segments projected to operate at LOS F, the project would add more than one percent of capacity in at least one direction during the AM and/or PM peak hour. The project was also expected to add more than one per cent of capacity to nine highway segments outside the immediate vicinity of the project in Santa Clara County, as well as on several segments in adjacent counties. Under the Mitigated Alternative 5, the number of segments in Santa Clara County would be reduced to three and there would be no impacted segments in adjacent counties.

CIR-6: The increased level of vehicle and bicycle traffic through the Ellis Street underpass at Highway 101 resulting from the project would increase hazards for bicyclists, who share the standard travel lanes in this location. Although a mitigation measure for this impact is included in this FEIS, the feasibility of this mitigation measure still needs to be studied. If the mitigation measure is infeasible, this would be a significant and unavoidable impact.

AQ-1: Build out of the NASA Ames Development Plan would result in population and vehicle uses projections that are inconsistent with regional air quality planning, and in emissions of air pollutants from automobiles and

construction equipment which would exceed significance thresholds established by the BAAQMD.

SOCIO-1: Mitigated Alternative 5 would generate one percent or more of the new households in the Housing Impact Area between 2000 and 2015 and contribute to the regional jobs-housing imbalance.

F. Systems of Measurement

NASA policy dictates that all measurements should be written in the metric system. Most of the numbers in this document were originally computed using the English system of measurement, so they have been converted into the metric system and rounded to the nearest significant digit. Throughout the text of this EIS, the original English measurement follows the metric number in parentheses. For example, the size of a particular buildings would be listed as 9,000 square meters (100,000 square feet).

G. Summary Table

Table 0-1 presents a summary of impacts and mitigation measures identified in this report. Impacts are referenced in this summary table as they appear throughout this EIS. For more detail, please refer to the applicable sections of this document.

Table 0-2 presents an overview of which impacts apply to the five individual alternatives reviewed in this EIS.

H. Summary of Changes in this Final EIS

The public review period for the Draft Programmatic EIS extended from December 10, 2001 to January 28, 2002. During that time, various agencies,

organizations and individuals submitted comments on the Draft Programmatic EIS. Substantive comments made during this review period are responded to in this Final Programmatic EIS as required under NEPA. Changes to the Draft Programmatic EIS that resulted from comments have been incorporated into the Final Programmatic EIS, and are shown in Chapters 1 through 5 and referenced in Chapter 12. These changes apply to Mitigated Alternative 5, the Preferred Alternative. The major changes made in this Final Programmatic EIS are as follows:

1. Additional Housing as a Mitigation Measure

The most significant change to this EIS is the addition of a new mitigation measure to Section 4.14 (SOCIO-1b). Several commentors requested consideration of additional housing in the NADP to decrease the impact of the development on the Bay Area's existing jobs/housing imbalance. NASA has responded in this Final Programmatic EIS by developing a mitigation measure that would add 890 housing units to the proposed development, bringing the total on-site housing to 1,930 units. The additional housing is presented herein as a mitigation measure to Impact SOCIO-1. Chapter 5 of this FPEIS has been added to analyze the impacts of implementing Mitigation Measure SOCIO-1b.

Even with mitigation, the alternatives would generate workers who would not be housed on-site who would represent over one percent of the predicted new households in the Housing Impact Area through 2015. Hence, this impact would still be significant and unavoidable.

2. Recalculation of Fill Needed in Bay View

As described in the DPEIS, fill would be required in the Bay View area in order to prevent flooding. Fill would be used to bring the finished grade up to a finished height of 2 meters (7 feet) along the northern edge of the Bay View area, and slope upward to the south to conform to the existing ground at higher elevations. A recalculation of fill requirements concluded that fill would be placed over a 102,000 square meter (1,100,000 square foot) area with fill ranging in depth from 0.15 meter (0.5 feet) to 1.4 meters (4.5 feet), with an average depth of 1.2 meters (4.0 feet). The total volume of fill required would be

approximately 123,000 cubic meters (160,000 cubic yards). This amount of fill is significantly less than the 170,000 cubic meters (220,000 cubic yards) that was calculated in the DPEIS.

The amount of earth needed to haul the fill is expected to generate 12,300 truck loads or 24,600 truck trips over a two- to three-year period. Based on 250 working days per year, this equates to an average of approximately 33 to 49 truck trips per day likely using the Highway 101/Moffett Field interchange. These trips will be distributed throughout the day and are not expected to significantly affect peak period intersection operations at the ramps or on-site. These numbers are lower than those calculated for the DPEIS, where an estimated 17,000 truck loads or 34,000 truck trips were reported.

3. Increase to Wetlands Buffer

The open space buffer between development and the wetlands in the Bay View area (see Mitigation Measure BIO-19) has been increased to 61 meters (200 feet).

4. Stormwater Drainage Changes

NASA has revised the conceptual plan for the storm drain system to reduce off-site flows and pollutant loading. In Bay View, stormwater would be retained on-site in recreational areas, then flow through swales to a settling basin. From there, it would move on to the Eastern Diked Marsh and then to the stormwater retention pond, thereby eliminating the need to route water directly to Stevens Creek. In addition, there have been changes to the design of the NASA Research Park storm system to slow drainage flows to the stormwater retention pond.

5. Construction Buildout

Construction of the increased housing under Mitigated Alternative 5 would cause the project to be built out over 11 years, instead of 10 years, to keep NO_x emissions below 91 tonnes (100 tons) per year, as required by the Clean Air Act.

6. Air Quality Impacts

The additional housing would cause emissions of reactive organic gases (ROG) that would exceed significance levels established by BAAQMD. This impact is described in Impact AQ-1.

7. Additional Changes

In addition, there were several other changes made to this Final Programmatic EIS. Each is briefly described below.

- **Traffic Analysis.** The text in Section 4.3 of the DPEIS indicated that the transportation analysis included 750 new employees associated with the Ames Research Center as part of the project. The analysis in fact included a building area for these employees that was equivalent to 1,300 employees or 550 more than actually proposed by NASA. Thus, the analysis presented in the DPEIS is overly conservative. Approximately 150 additional gross trips during both the AM and PM peak hours reflect trips made by the additional employees. The equivalent building area representing the correct number of employees (750) was used in the Mitigated Alternative 5 analysis to more accurately model impacts of the proposed project on intersections and freeway segments.
- **Best Management Practices for Stormwater Quality.** A series of Best Management Practices (BMPs) have been added to Chapter 2. NASA would implement these BMPs under the NADP.
- **Reassessment of School Impacts.** This Final Programmatic EIS contains a reassessment of the impact to schools resulting from implementation of the NADP. The reassessment found that the potential impact to elementary schools would be mitigated because development under the NADP would pay Developer Impact Fees that would be used by the Mountain View-Whisman School District to build new classrooms and other facilities. The reassessment also found that the plan, under Alternatives 2, 4, 5, and Mitigated Alternative 5, would generate operational costs to the local high school district that would exceed 0.5 percent of the district's annual revenue limit. This impact would be

mitigated by Mitigation Measure SOCIO-3, which states that should the Mountain View-Los Altos Union High School District's per student expenditures decrease below a pre-determined baseline as a direct result of enrollment generated by NADP, NASA's partners would compensate the District for the additional cost of these students. The baseline would be set to the year prior to when students generated by NADP first begin attending classes in the district, and would be adjusted for cost of living and inflationary changes over time.

- **Analysis of Bat Species.** Additional analysis of bat species was included in this Final Programmatic EIS based upon comments from the California Department of Fish and Game. Some of the bat species that could potentially occur at Ames Research Center (e.g. long-legged myotis, long-eared myotis, Townsend's big-eared bat, yuma myotis) are special-status species. Bats may forage for insects above wetland areas such as the Eastern and Western Diked Marshes and Storm Water Retention Pond in the North of Bay View area. While none of these special status bat species are known to occur at Ames Research Center, the Mexican free tail bat does roost in a number of the buildings.
- **Wetland Delineation.** The wetland delineation for NASA Ames Research Center was verified by the US Army Corps of Engineers (Corps) in May 2001. Verification is included in Appendix E of this document. Some of the seasonal wetlands identified in the Bay View area in the preliminary wetland delineation were eliminated from the final Corps verification based upon the human-induced ponding mechanism that, when removed, also removed wetland indicators from the ponded areas. Thus, the total area of verified wetlands in the Bay View area of 2.1 hectares (5.3 acres) is less than that identified in the preliminary delineation 2.2 hectares (5.5 acres). After the verification, NASA altered the building envelope in the Bay View area to avoid direct impacts to wetlands as a result of implementing the proposed action. There are no wetlands in the revised Bay View area. As a result, direct impacts to wetlands, as well as mitigation measures associated with the loss of wetland areas from

implementation of the proposed action have been removed from this Final Programmatic EIS.

- **New or Revised Impacts and Mitigation Measures.** Several commentors suggested amendments to mitigation measures, which have been incorporated into the Final Programmatic EIS. For example, a comment from the EPA led to the addition of new air quality mitigation measures. In addition, several commentors suggested other new mitigation measures that have also been incorporated. The new and revised impacts and mitigation measures are as follows below.

Impact CIR-1: Implementation of the proposed project would increase vehicle trips and traffic congestion on segments of Highways 101, 85, and 237 in the immediate vicinity of the Ames Campus, as well as on highway segments outside the local study area. On all nearby segments projected to operate at LOS F, the project would add more than one percent of capacity in at least one direction during the AM and/or PM peak hour. The project is also expected to add more than one percent of capacity to numerous highway segments outside the immediate vicinity of the project in Santa Clara County, as well as on several segments in adjacent counties. Under the Mitigated Alternative 5, the number of segments would be reduced to three.

Mitigation Measure CIR-1: As part of the NADP, NASA and its partners would implement an aggressive Transportation Demand Management (TDM) program designed to reduce trip generation by a total of at least 22 percent. AVR goals are set for each phase of the TDM plan. Development will not proceed to the next phase until the previous phase's goal has been met. In addition, on-site housing would also help to reduce vehicle trip generation to external streets and freeways by internalizing trips to on-site employment centers and amenities.

To completely mitigate the highway impacts of the proposed project under any of the development alternatives, each highway segment would have to be widened to provide an additional travel lane in at least one direction or

other capacity improvements would have to be made. In many cases, widening is infeasible due to right-of-way constraints and the proximity of existing building structures and development. Immediately adjacent to the project site, for example, Highway 101 could not be widened because of the proximity of Manila Drive and the VTA light rail line. In addition, large-scale freeway widening projects are beyond the scope of a single project and could only garner a relatively small fair-share contribution towards the improvement. Therefore, despite the substantial trip reductions from implementation of the TDM program, the increase in vehicle trips and congestion on the highway system associated with implementation of the NADP would be a significant, unavoidable impact. NASA will work with VTA and Caltrans to consider other mitigations.

Impact CIR-6: The increased level of vehicle and bicycle traffic through the Ellis Street underpass at Highway 101 resulting from the project would increase hazards for bicyclists, who share the standard travel lanes in this location.

Mitigation Measure CIR-6: Development under the NADP would modify the Ellis Street underpass to better accommodate bicyclists.

One option would be to shift all of the vehicle travel lanes to the north by 4 to 5 meters (12 to 15 feet). Currently, two travel lanes are provided in each direction between three sets of concrete piers. By moving the westbound lane to the north side of the northernmost piers and shifting the other lanes accordingly, additional width could be provided to accommodate bicycle lanes. The northern abutment would have to be rebuilt with a retaining wall similar to the design that was implemented to accommodate the light rail tracks. If this option were implemented, bike lanes would be at least 1.5 meters (5 feet) wide, and adequate signage and lighting would be provided. Figure 4.3-6 illustrates this measure. The feasibility of this improvement would have to be evaluated by a structural engineer and by Caltrans since the intersection configurations at the two adjacent ramp intersections would have to be modified.

Another option would be to modify the intersection to provide reversible 2.4-meter (8-foot) lanes that would allow for two lanes of car traffic and one lane of eastbound bike traffic in the morning and only one lane of car traffic and one lane for bikes in a westbound direction. In the afternoon/evening, the extra lane would provide westbound traffic flows. Again, adequate signage and lighting would be provided.

Implementation of this mitigation measure would reduce the potential impact on bicyclist safety to less-than-significant levels. If this improvement is determined to be infeasible and no alternative is found, then the impact would remain significant and unavoidable.

Impact CIR-7: Construction activity associated with the proposed improvements to facilities within Caltrans right-of-way has the potential to introduce pollutant laden runoff into the storm drain system.

Mitigation Measure CIR-7: Improvements to facilities within Caltrans right-of-way associated with the development proposed under the NADP shall adhere to the conditions and requirements of Caltrans statewide NPDES Permit CAS #000003, Order #99-06-DWQ and NPDES General Permit CAS #000002, Order #99-08-DWQ, and shall incorporate Best Management Practices described in Section 4.4 of the Storm Water Management Plan which implements the statewide NPDES permit, as such requirements specifically apply to the proposed improvements. In general, this would include the preparation and implementation of a Storm Water Pollution Prevention Plan and Best Management Practices for construction and post-construction conditions for each such project.

Impact AQ-7: Construction emissions associated with new development and renovation of existing facilities would result in potentially unhealthy air pollutant concentrations.

Mitigation Measure AQ-7a: NASA and its partners would install air pollution devices, for example, particulate traps and oxidation catalysts, on construction equipment to the extent that they are technically feasible.

Mitigation Measure AQ-7b: NASA and its partners would develop and implement a Construction Emissions Mitigation Plan (CEMP) to ensure that the project would comply with the Federal Clean Air Act and further reduce emissions. The plan would include measures and procedures, sufficiently defined to ensure a reduction of nitrogen oxides, PM₁₀, and diesel particulate matter.

The CEMP would be developed in consultation with EPA and BAAQMD. The CEMP would be evaluated by NASA and its partners on an annual basis to schedule construction ensuring that emissions of ozone precursors associated with project construction and operation would not exceed 91 tonnes (100 tons) per year and update measures to include new rules or regulations. NASA and its partners would consult with the BAAQMD on an annual basis during project construction to determine if additional air quality mitigations to reduce the project's air quality impact are warranted, and to take such additional air quality mitigation as is appropriate and reasonable, and in an expeditious manner.

A CEMP coordinator, who would also act as a "Disturbance Coordinator" would be responsible for ensuring that measures included in the CEMP are implemented. This would be done through field inspections, records review, and investigations of complaints.

At a minimum, the CEMP would include the following measures to reduce emissions from construction activities:

- Require that all equipment is properly maintained at all times. All construction equipment working on site would be required to include maintenance records indicating that all equipment is tuned to engine

manufacturer's specifications in accordance with the time frame recommended by the manufacturer.

- All construction equipment would be prohibited from idling more than 5 minutes.
- Tampering with equipment to increase horsepower would be strictly prohibited.
- Include particulate traps, oxidation catalysts and other suitable control devices on all construction equipment used at the site.
- Diesel fuel having a sulfur content of 15 ppm or less, or other suitable alternative diesel fuel, would be used unless such fuel cannot be reasonably procured in the market area.
- The CEMP would also ensure that construction-related trips are minimized through appropriate policies and implementation measures.
- The CEMP would address the feasibility on a biannual basis of requiring the use of reformulated or alternative diesel fuels.
- The CEMP Coordinator (or Environmental Coordinator) would prohibit the use of equipment that visibly produces substantially higher emissions than other typical equipment of similar size.
- The staging of three or more pieces of construction equipment near or just upwind from sensitive receptors such as residences or daycare uses would be prohibited.

Mitigation Measure AQ7c: The CEMP would address the feasibility of requiring or encouraging the use of "Cleaner" (Lower Emissions) construction equipment on an annual basis. For larger construction projects (i.e., projects greater than 9,290 square meters (100,000 square feet)), a percentage of the equipment would be required to be 1996 or newer. This would be determined as follows:

- If equipment is leased by the contractor, then the percentage of 1996 or newer equipment would be maximized so that the total cost of leasing equipment would not exceed 110 percent of the average available cost for leased equipment.
- If equipment is owned by the Contractor, then the CEMP shall identify the minimum percentage of total horsepower for 1996 or newer equipment that should be used in construction. For the first year of construction, it shall be considered possible that 1996 or newer equipment shall makeup a minimum of 75 percent of the total horsepower, unless NASA and its partners can show the BAAQMD that it is not reasonable.

Impact INFRA-1: Portions of the sanitary sewer conveyance system between Ames Research Center and the SWPCP are already flowing at or near maximum capacity. Under Alternatives 2 through 5, discharge from the development proposed under the NADP would contribute to the existing capacity problems.

Mitigation Measure INFRA-1: NASA would cooperate with the City of Sunnyvale in determining the cumulative impact of existing and proposed development on the sanitary sewer conveyance system between Ames Research Center and the SWPCP. NASA and its partners would contribute their fair share toward construction of conveyance pipes and supporting infrastructure which are determined to be necessary to mitigate the cumulative impact of existing and proposed development.

Impact INFRA-3: Under Alternatives 2, 4 and 5, discharge from Ames Research Center to the PARWQCP would increase. The plant has sufficient capacity to treat the additional flow. However, the flow for all alternatives would exceed what is specified in the 1993 agreement (which was renewed in 1999) between Ames Research Center and the Plant. NASA does not have a current flow capacity agreement with the City of Mountain View or the

PARWQCP. However, NASA has a current wastewater discharge permit with PARWQCP.

Mitigation Measure INFRA-3: The 1993 agreement for flow capacity between the PARWQCP and Ames Research Center and between Mountain View and Ames Research Center would be amended to address the additional flow expected from the project before commencing any development. The agreement with Mountain View would include trigger amounts and a formula for the fair share as identified in INFRA-2.

Impact SERV-1: Under Alternatives 2, 4, 5, and Mitigated Alternative 5, housing development in the Bay View Area would result in an increase in elementary school students that would impact the Mountain View-Whisman School District.

Mitigation Measure SERV-1: The NADP housing developers would pay the standard Developer Impact Fees to the Mountain View-Whisman School District.

Impact HAZ-2: Proposed childcare facilities in the Bay View area could be located near the Mountain View Industrial Park, where some businesses handle hazardous materials. Spills or releases at these businesses could expose children to hazardous air pollution. This would be a significant impact.

Mitigation Measure HAZ-2: In Alternatives 2, 4 and 5, NASA or its partners would locate childcare facilities at least 305 meters (1,000 feet) from the industrial area of Mountain View, which would limit the area in which industries handling hazardous materials would be prohibited. Mitigated Alternative 5 would locate childcare facilities at least 402 meters (1,320 feet) from the industrial area of Mountain View in accordance with City of Mountain View policy.

Impact GEO-4: Detailed geotechnical studies have yet to be completed for most of the potential building sites at Ames Research Center. While

preliminary studies indicate that it would be possible to safely construct the types of buildings foreseen for all planning areas under any of the alternatives, there may be specific geotechnical hazards on individual sites that require mitigation when construction occurs.

Mitigation Measure GEO-4: Prior to construction of individual facilities, NASA or its partners would conduct detailed geotechnical investigations of all proposed building sites, and would incorporate the engineering recommendations of these studies into building design and construction.

Impact BIO-1: Construction vehicles could inadvertently injure or kill individuals of special-status species or migratory birds. Because of the rarity of salt marsh harvest mouse (an endangered species), in particular, construction-related mortality could be a significant impact.

Mitigation Measure BIO-1: To minimize the potential for injury or death caused by construction vehicles to western burrowing owls or migratory birds in all four planning areas and to salt marsh harvest mice in the Bay View area, the following components would be implemented:

- As much as possible, construction traffic would not be routed on roads adjacent to habitats where these special-status species occur and would be prohibited from using roads when habitat considerations require it.
- Occupied or potential habitat for these species near established routes would be marked as off-limits to construction vehicles.
- In the Bay View area, if construction vehicles must travel on roads within approximately 30 meters (100 feet) of occupied or potential habitat, drift fencing would be erected to prevent salt marsh harvest mice from crossing these roads. The drift fencing would be placed so that harvest mice retain access to adjacent upland habitats for use as refugia during high water events.

- All drivers of construction vehicles would be informed of the established vehicle routes and made aware of the importance of avoiding occupied and potential habitat for western burrowing owls and salt marsh harvest mice.
- Construction activity would not be allowed to disturb nesting migratory birds.

Impact BIO-2: There could be indirect adverse impacts if runoff from construction sites entered adjacent wetlands, decreasing water quality in these wetland communities.

Mitigation Measure BIO-2b: A wetland enhancement plan would be developed for the restoration of functions and values of aquatic habitats in and adjacent to the Bay View area and outside of development area. This plan would include provisions to improve the quality of existing wetlands in the Bay View area through removal of invasive non-native plants such as periwinkle and perennial pepperweed. This enhancement plan would be developed in coordination with, and would be approved by, the US Army Corps of Engineers and the Regional Water Quality Control Board prior to implementation of the proposed action.

All construction near or adjacent to wetlands would implement standard Best Management Practices to minimize runoff into these sensitive areas. Implementing grading and construction during the driest months of the year (July–October) would reduce the potential for siltation and runoff into surrounding habitats.

Impact BIO-4: New development at Ames Research Center would increase the number of employees on-site, with a corresponding increase in the potential for people to release unwanted cats and establish unauthorized feeding stations for feral cats. The populations of feral cats and other predatory species would increase, and with it predation on native species, especially ground-nesting and special-status birds.

Mitigation Measure BIO-4: NASA and its partners would institute the following programs and policies to limit increases in predator populations:

- Prohibit employees from feeding wildlife, including cats.
- Institute and enforce a no pets policy in new housing.
- Install trash containers that cannot be opened by predator species.
- Augment the existing non-native predator control program, which includes humane trapping and removal of feral cats and other non-native predators.
- Conduct a public education program about the impacts caused by non-native predators and the need to refrain from feeding feral cats and other wildlife.
- A regular construction cleanup crew would be designated to ensure that construction debris and trash do not attract predators or scavengers.

Impact BIO-5: Building-roosting bats may be disturbed by the demolition and renovation of existing buildings at Ames Research Center.

Mitigation Measure BIO-5: To avoid impacts to roosting bats, a preconstruction survey of buildings to be demolished or renovated would be conducted by a qualified wildlife biologist in accordance with recommendations of the California Department of Fish and Game. If special status roosting bats are found, CDFG would be consulted. An avoidance or mitigation plan would be developed and implemented. Avoidance measures could include construction outside of hibernation and maternal roosting time periods (winter), excluding bats from the buildings after they have left the roost to forage at night by closing entrances, and the construction of bat boxes to accommodate displaced bats. If bat boxes are used, NASA would monitor their success.

Impact BIO-7: Lighting along roads and buildings in proposed development areas in the Bay View area may impact wildlife species by disrupting their movements, breeding, or other behaviors.

Mitigation Measure BIO-7: NASA is conducting a lighting study to determine baseline levels. When feasible, nighttime lighting would be excluded in new development adjacent to high-quality wildlife habitat in the North of Bay View area. The Bay View housing would not be allowed to cause a net increase in lighting in the areas north or east of Bay View. The impacts of necessary lighting would be minimized by using low-glare light sources (e.g., low pressure sodium lighting) mounted on short poles and directed away from native habitats. In addition, light amplification to nearby sensitive areas would be eliminated through directional lighting with baffles, non-reflective tinting on windows, and other mechanisms.

Impact BIO-10: While NASA has taken steps to avoid most potential impacts to nesting habitat, new development would result in the loss of owl nesting habitat in NRP Parcels 7 and 8. In addition, development would cause the loss of some foraging habitat, especially in the Bay View area.

Mitigation Measure BIO-10: NASA and its partners would:

- Establish a burrowing owl preserve in the NRP area which would prevent impacts to owls currently nesting within the future preserve area, and mitigate impacts to owls that might be disturbed by development on NRP Parcels 7 and 8. Restoration, including the removal of concrete, asphalt and other structures, and enhancement of the preserve in the NRP area sufficient to offset development impacts would occur prior to that development.
- Design landscaping in developed areas with low growing native vegetation to enhance owl use.

- Minimize the development footprint to the extent possible, and locate new development adjacent to existing development to minimize habitat fragmentation.
- Minimize construction impacts on nesting and foraging habitat by restricting the area available for circulation and staging of equipment.
- Manage other grassland areas at Ames Research Center to support owls and their prey.

Impact BIO-11: There could be short-term disturbances to existing burrows if construction occurred too close to the burrows. There could also be long-term disturbances caused by increased intrusion into nesting areas by new residents, employees, and visitors and their pets.

Mitigation Measure BIO-11b: In order to prevent long-term disturbances from increases in population associated with implementation of the NADP, NASA and its partners would:

- Fence off owl habitat with attractive fencing and low, native shrubs.
- Design paths around the perimeter of owl habitat to allow people to see the owls without disturbing them.
- Prohibit walkers, bikers, and dogs from moving through the habitat areas.
- Use signage to educate people about the owls and their sensitivities.
- Monitor habitat areas after construction, and implement further protective measures as needed.
- Restrict construction of roads, trails, pathways, and other development from occurring within designated burrowing owl preserves.

Impact BIO-15: Proposed new development could increase the population of predators by planting new trees and installing light poles that provide perches

for birds of prey, by creating habitat for rodents, and by increasing the population of people, some of whom may feed feral cats.

Mitigation Measure BIO-15: In order to prevent increased predation, NASA would enforce Mitigation Measure BIO-4, above. In addition, NASA and its partners would:

- Continue on-going efforts to control non-native predators in conjunction with US Fish and Wildlife.
- Limit tree planting along roads or buildings adjacent to owl and other wildlife habitat areas to minimize the increase in available perches for avian predators, and modify other potential perches structurally to discourage predators.
- Minimize outdoor lighting posts near burrowing owl and other wildlife habitat to reduce new perches for avian predators. Where lighting is needed for safety reasons, install devices to discourage birds from perching.
- Trees in Bay View adjacent to the Western Dikes Marsh would be from the USFWS approved list.
- Compensate for increases in predation by eliminating predator perches along and within the boundaries of the Western Diked Marsh, Eastern Diked Marsh and Storm Water Retention Pond.
 - " Place roll wire atop all fencing surrounding the eastern and western diked marshes and the storm water retention pond.
 - " Place anti-perch devices on and surrounding the Plant Engineering facilities at the northwest corner of ARC property.
 - " If feasible, remove all landscape features within these areas that provide perches for avian predators.
- If possible, avoid the use of rip rap on slopes resulting from fill of the Bay View housing area. If rip rap must be used, it must be small diameter materials that would not create habitat for rodents.

- Avoid placing rip rap on existing marsh vegetation.

Impact BIO-18: There could be indirect adverse impacts if runoff from construction sites entered the existing storm drain system and the Storm Water Retention Pond.

Mitigation Measure BIO-18: Potentially contaminated runoff would be managed using stormwater BMPs. Swales would be constructed adjacent to wetlands in upland areas to intercept and filter any runoff before it reaches the wetland. Construction of swales would be permitted within the buffer zone around wetlands, but not within the wetlands themselves.

Impact BIO-19: There could be indirect adverse impacts if runoff from construction sites entered adjacent wetlands, decreasing water quality in these wetland communities.

Mitigation Measure BIO-19: To minimize impacts on wetlands, construction would be avoided in the jurisdictional wetlands along the northern boundary of the Bay View area and within the buffer zone of these wetlands. Fill activities and other disturbances would be avoided in jurisdictional wetlands elsewhere in the Eastside/Airfield area.

Impact NOISE-1: Buildout of the NADP would potentially expose new land uses in the Bay View, NRP, and Ames Campus areas to existing noise sources at levels exceeding those considered normally acceptable for the intended use. Buildings 19 and 20, which are proposed for housing in Mitigated Alternative 5, would be in the 70 to 75 dB and 65 to 70 dB noise exposure areas, respectively.

Mitigation Measure NOISE-1a: For development on NRP Parcels 2, 4, 9, 10, 11, 12, 12a and 16, and the Ames Campus, noise mitigation measures, including site planning to protect noise sensitive outdoor activity areas and building sound insulation treatments to protect noise sensitive indoor spaces, would be included in project design and development. Buildings

would be designed to provide an appropriate Noise Level Reduction (NLR) depending upon the designated uses of the sensitive spaces.

Impact AES-1: The lack of design guidelines, height limits, and setback requirements for the Bay View, Ames Campus, and Eastside/Airfield areas could allow future development to create too stark a contrast in terms of height, density, or architectural style.

Mitigation Measure AES-1: NASA and its partners would develop design guidelines for the Bay View, Ames Campus and Eastside/Airfield areas in order to ensure that new buildings would stylistically complement the existing buildings in the Ames Campus and Eastside/Airfield. Design guidelines for the Bay View area would include setback requirements for Stevens Creek and Western Diked Marsh, and would ensure harmonious design.

Impact AES-2: The allowed four- to six-story height of proposed student apartments on NRP parcel 6 could conflict with the prevailing low heights in the adjacent Berry Court Military Housing area.

Impact AES-5: New development in the Bay View area could block views from the Stevens Creek Trail of the historic hangars and the San Francisco Bay.

Mitigation Measure AES-5: NASA and its partners would use site layout to preserve view corridors from the Stevens Creek Trail through new development in Bay View to the historic hangars and to the San Francisco Bay.

Impact REC-1: Alternatives 2 through 4 would not supply enough new recreational space to meet demands generated by new employees and residents.

Mitigation Measure REC-1: NASA and/or its partners would develop additional active recreation areas in development areas on the ARC site to meet recreation demands generated by new employees and residents.

Impact CUL-2: Rehabilitating existing historic structures could significantly impact their integrity.

Mitigation Measure CUL-2a: Any project that involves the rehabilitation of contributing buildings within the Shenandoah Plaza Historic District would follow the Historic Resource Protection Plan. Appropriate landscaping would be used to avoid impact to historic buildings. The Historic Resources Protection Plan includes the guidelines for Rehabilitation of Historic structures prepared for NASA by Architectural Resources Group, and the Reuse Guideline for Hangar 1, prepared by Page and Turnbull, which comply with the Secretary of the Interior's Standards. New additions would be located on secondary facades. Restoring facades that have been previously altered would be considered as an alternative.

Mitigation Measure CUL-2b: The State Historical Building Code would be used when planning for structural stability or the installation of protective or code required mechanical systems or access.

Mitigation Measure CUL-2c: Design guidelines for the historic structures would be modified to include:

- Replacement glass would be with like kind.
- No change of exterior material would occur.
- Installation of utilities would not affect historic character defining features.
- New materials would not affect the historic integrity of original materials.
- Ground disturbing activities would match materials in-kind.

Impact SOCIO-1: Alternatives 2 through 5 would generate one percent or more of the new households in the Housing Impact Area between 2000 and 2015 and contribute to the regional jobs-housing imbalance.

Mitigation Measure SOCIO-1a: NASA will continue to attempt to acquire the rights to occupy as much of the Department of Defense (DOD) housing located at Moffett Field as possible to bolster the projected supply provided under each of the alternatives.

Mitigation Measure SOCIO-1b: In the Mitigated Alternative 5, NASA would require the provision of 1,120 townhome and apartment units in the Bay View area, and 810 student apartment and dormitory units in the NRP area. If this level of housing development could not be achieved, NASA would commensurately scale back the employment and student generating components of the project.

The provision of these units could have the potential to create secondary impacts in the areas of traffic, air quality, infrastructure, services, noise and fiscal impact. These impacts are discussed in detail in Chapter 5. The analysis of these potential impacts concludes that there would be no significant impacts beyond those disclosed in the DPEIS. In fact, traffic impacts would be lessened. Infrastructure, service, and fiscal impacts would be mitigated through the payment of fair share contributions to sewer infrastructure and through Developer Impact Fees to offset impacts to schools, libraries and recreational programs in the City of Mountain View. Although residential uses in Building 20 would be within a 70dB noise exposure contour, this is considered conditionally acceptable by HUD and California Planning Guidelines, although not by Santa Clara County. Building 19 would be in a noise exposure area of 70 to 75 dB, which is above California Planning Guidelines conditionally acceptable levels, but is still conditionally acceptable to HUD. These noise impacts would be mitigated to less than significant levels.

Mitigation Measure SOCIO-1c: NASA would continue to evaluate the possibility of constructing housing above retail proposed in the NRP area.

Mitigation Measure SOCIO-1d: NASA would require at least 10 percent of the on-site housing to be affordable to low income households.

These four mitigation measures would not completely mitigate the impact. The Bay Area, and Santa Clara County in particular, has one of the most competitive housing markets in the nation. Housing demand far outstrips supply throughout the region, and the additional jobs generated by the NADP would contribute to the regional housing demand. Even with mitigation, the alternatives would generate workers who would not be housed on-site who would represent over one percent of the predicted new households in the Housing Impact Area through 2015. Hence, this impact would be significant and unavoidable.

Impact SOCIO-2: Alternative 3 would generate a net negative fiscal impact on the City of Mountain View, due in particular to increased demands on recreational and library facilities.

Mitigation Measure SOCIO-2: NASA, in collaboration with its Partners, would provide on-site library and recreation facilities. These would include community rooms within the residential portions of the project, an on-site fitness center, and reading rooms and libraries as part of the University-related uses.

Impact SOCIO-3: Under Alternatives 2, 4, 5, and Mitigated Alternative 5, increases in costs generated by ARC high-school students could exceed 0.5 percent of the Mountain View-Los Altos Union High School District annual revenue limit.

Mitigation Measure SOCIO-3: NASA and the Mountain View-Los Altos Union High School District will negotiate an agreement whereby in any given year, should the Mountain View-Los Altos Union High School

District's per student operating revenues decrease below a pre-determined baseline as a direct result of enrollment generated by the NADP, NASA or its partners will compensate the District for the shortfall associated with these students. The baseline would be set to the District's per student operating revenues in the year prior to when students residing at ARC first begin attending classes in the District, and would be adjusted for cost of living and inflationary changes over time.

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TABLE O-I SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Applicable to Alternative(s)	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
PUBLIC POLICY				
There are no significant impacts or mitigation measures for public policy.				
LAND USE				
There are no significant impacts or mitigation measures for land use.				
TRAFFIC				
CIR-1: Implementation of the proposed project would increase vehicle trips and traffic congestion on segments of Highways 101, 85, and 237 in the immediate vicinity of the Ames Campus, as well as on highway segments outside the local study area. On all nearby segments projected to operate at LOS F, the project would add more than one percent of capacity in at least one direction during the AM and/or PM peak hour. The project is also expected to add more than one percent of capacity to numerous highway segments outside the immediate vicinity of the project in Santa Clara County, as well as on several segments in adjacent counties.	2 through 5, and Mitigated Alternative 5	S	<p>CIR-1: As part of the NADP, NASA and its partners would implement an aggressive Transportation Demand Management (TDM) program designed to reduce trip generation by a total of at least 22 percent. AVR goals are set for each phase of the TDM plan. Development will not proceed to the next phase until the previous phase's goal has been met. In addition, on-site housing would also help to reduce vehicle trip generation to external streets and freeways by internalizing trips to on-site employment centers and amenities.</p> <p>To completely mitigate the highway impacts of the proposed project under any of the development alternatives, each highway segment would have to be widened to provide an additional travel lane in at least one direction or other capacity improvements would have to be made. In many cases, widening is infeasible due to right-of-way constraints and the proximity of existing building structures and development. Immediately adjacent to the project site, for example, Highway 101 could not be widened because of the proximity of Manila Drive and the VTA light rail line. In addition, large-scale freeway widening projects are beyond the scope of a single project and could only garner a relatively small fair-share contribution towards the improvement. Therefore, despite the substantial trip reductions from implementation of the TDM program, the increase in vehicle trips and congestion on the highway system associated with implementation of the NADP would be a significant, unavoidable impact. NASA will work with VTA and Caltrans to consider other mitigations.</p>	SU

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Significant Impact	Applicable to Alternative(s)	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
CIR-2: The proposed project would increase vehicle trips and traffic congestion at the Moffett Boulevard/Central Expressway and Ellis Street/Manila Drive intersections.	2 through 4	S	CIR-2a: <i>Moffett Boulevard/Central Expressway</i> . The improvement required to mitigate this impact is the addition of a separate right turn lane from southbound Moffett Boulevard to westbound Central Expressway. This measure would require right-of-way acquisition to implement. The additional lane would improve operations to LOS E during the PM peak hour and would fully mitigate the impact.	LTS
			<p>CIR-2b: <i>Intersection of Ellis Street/Manila Drive</i>. Development under the NADP would include the following improvements to achieve acceptable operations and minimize queuing at this intersection:</p> <ul style="list-style-type: none"> — Install a traffic signal. — Provide the following lane configurations: <ul style="list-style-type: none"> " <i>Northbound (from Highway 101)</i>: two through lanes and one right-turn lane. " <i>Southbound (from NRP)</i>: one left-turn lane and two through lanes. " <i>Westbound (from the LRT station)</i>: one left-turn lane and one shared left-turn/right-turn lane. <p>This measure would provide LOS C operations during the PM peak hour.</p>	LTS

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Significant Impact	Applicable to Alternative(s)	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
CIR-3: The proposed project would increase vehicle trips and traffic congestion at the intersections of Moffett Boulevard-Clark Memorial Drive/R.T. Jones Road.	2 through 5, and Mitigated Alternative 5	S	<p>CIR-3: <i>Intersection of Moffett Boulevard/Clark Memorial Drive/R.T. Jones Road.</i> Development under the NADP would include the following improvements to achieve acceptable operations and minimize queuing at this intersection:</p> <ul style="list-style-type: none"> — Installation of a traffic signal. — Provision of the following lane configurations: <ul style="list-style-type: none"> " <i>Northbound (from Space Camp/base housing):</i> one left-turn lane, one shared through/right-turn lane. " <i>Southbound (from Bay View):</i> one left-turn lane, one through lane, and one "free" right-turn lane (i.e., the right-turn movement would not be controlled by the signal and would require a third westbound receiving lane on Moffett Boulevard). " <i>Westbound (from Clark Memorial Drive):</i> one left-turn lane, two through lanes, and one right-turn lane. " <i>Eastbound (from Highway 101):</i> two left-turn lanes, one through lane, and one shared through/right-turn lane. <p>This measure would provide LOS C or D operations or better during all periods under all alternatives.</p>	LTS
CIR-4: The proposed project would increase vehicle trips and traffic congestion at the following intersections Moffett Boulevard/Highway 101 SB ramps Moffett Boulevard/Highway 101 NB ramps Central Expressway/Mary Avenue.	4	S	<p>CIR-4a: <i>Moffett Boulevard/Highway 101 SB ramps.</i> Mitigation of this impact for Alternative 4 would require the addition of a second westbound left-turn lane to southbound Highway 101. The current plans for the interchange modification currently only include a single westbound left-turn lane. This improvement would provide LOS B operations during the PM peak hour. Because of cost, political, and ownership considerations, this mitigation measure is not feasible. Thus this impact would remain significant and unavoidable.</p>	SU

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			<p>CIR-4b: <i>Moffett Boulevard/Highway 101 NB ramps</i>. Mitigation for Alternative 4 would require the addition of a second northbound right-turn lane on the off-ramp from U.S. 101. The current plans for the interchange modification currently only include a single northbound right-turn lane towards the project site. This improvement would provide LOS C operations during the AM peak hour. Because of cost, political, and ownership considerations, this mitigation measure is not feasible. Thus this impact would remain significant and unavoidable.</p> <p>CIR-4c: <i>Central Expressway/Mary Avenue</i>. Mitigation for Alternative 4 would require the addition of a second southbound right-turn lane to westbound Central Expressway. This improvement would provide LOS E operations during the AM peak hour. However, adjacent existing development and a sidewalk would preclude widening of the roadway. Because of these right-of-way constraints, this mitigation measure is not considered feasible. Thus this impact would remain significant and unavoidable.</p>	<p>SU</p> <p>SU</p>
<p>CIR-5: Alternatives 2 and 4 would increase vehicle trips and traffic congestion at the following intersections:</p> <p>Moffett Boulevard/Middlefield Road SR 237 EB Ramps/Mathilda Avenue SR 237 WB Ramps/Mathilda Avenue Moffett Park Drive/Mathilda Avenue</p>	2 and 4	S	<p>CIR-5a: <i>Moffett Boulevard/Middlefield Road</i>. To fully mitigate the impacts under both the AM and PM peak hours at this location, a separate right-turn lane from Middlefield Road to northbound Moffett Boulevard would be required. In addition, an overlap signal phase concurrent with the left-turn phase for southbound Moffett Boulevard to eastbound Middlefield Road would be required.</p> <p>These improvements would provide LOS D operations during both peak hours and would fully mitigate the projected impacts. However, a preliminary field review indicates that this improvement is not feasible due to the proximity of existing development and a sidewalk. Thus, the impact is expected to remain significant and unavoidable.</p>	SU

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Significant Impact	Applicable to Alternative(s)	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
			<p>CIR-5b: <i>SR 237 EB Ramps/Mathilda Avenue</i>. The addition of any lane capacity at this location would require: complete re-construction of the Highway 101 overpass to widen the road for additional through lanes, non-standard lane configurations such as four left-turn lanes, or provision of another street crossing over SR 237 (e.g., the Mary Avenue overcrossing). Because of cost, political, and ownership considerations, this mitigation measure is not feasible. Thus this impact would remain significant and unavoidable.</p> <p>CIR-5c: <i>SR 237 WB Ramps/Mathilda Avenue</i>. Mitigation of this impact would require the addition of a separate southbound right-turn lane from Mathilda Avenue to the on-ramp to westbound SR 237 to provide four exclusive southbound through lanes. Because of cost, political, and ownership considerations, this mitigation measure is not feasible. Thus this impact would remain significant and unavoidable.</p> <p>CIR-5d: <i>Moffett Park Drive/Mathilda Avenue</i>. Mitigation of this impact would require the addition of a second southbound right-turn lane from Moffett Park Drive to westbound Mathilda Avenue towards downtown Sunnyvale. This lane would be in addition to the existing right-turn lane from Moffett Park Drive to westbound Highway 237, but would likely require modification of this already short-radius curve. Because of cost, political, and ownership considerations, this mitigation measure is not feasible. Thus, this impact would remain significant and unavoidable.</p>	<p>SU</p> <p>SU</p> <p>SU</p>
CIR-6: The increased level of vehicle and bicycle traffic through the Ellis Street underpass at Highway 101 resulting from the project would increase hazards for bicyclists, who share the standard travel lanes in this location.	2 through 5, and Mitigated Alternative 5	S	CIR-6: Development under the NADP would modify the Ellis Street underpass to better accommodate bicyclists.	LTS (unless unable to implement)

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Significant Impact	Applicable to Alternative(s)	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
CIR-7: Construction activity associated with the proposed improvements to facilities within Caltrans right-of-way has the potential to introduce pollutant laden runoff into the storm drain system.	2 through 5, and Mitigated Alternative 5	S	CIR-7: Improvements to facilities within Caltrans right-of-way associated with the development proposed under the NADP shall adhere to the conditions and requirements of Caltrans statewide NPDES Permit CAS #000003, Order #99-06-DWQ and NPDES General Permit CAS #000002, Order #99-08-DWQ, and shall incorporate Best Management Practices described in Section 4.4 of the Storm Water Management Plan which implements the statewide NPDES permit, as such requirements specifically apply to the proposed improvements. In general, this would include the preparation and implementation of a Storm Water Pollution Prevention Plan and Best Management Practices for construction and post-construction conditions for each such project.	LTS
AIR QUALITY				
AQ-1: Build out of the NASA Ames Development Plan would result in population and vehicle uses projections that are inconsistent with regional air quality planning, and in emissions of air pollutants from automobiles and construction equipment which would exceed significance thresholds established by the BAAQMD.	2 through 5, and Mitigated Alternative 5	S	AQ-1: The NADP includes a proposed TDM plan to reduce automobile trips from existing and planned uses. Even with the substantial reductions in vehicle trips projected in the TDM plan, emissions would remain above BAAQMD significance thresholds. This impact is significant and unavoidable.	SU
AQ-2: Without limits on the timing of construction, emissions of ozone precursors associated with combined construction and operation of the project could exceed 90,719 kilograms (100 tons) in any given year in which construction occurs. This would exceed the <i>de minimus</i> levels set forth in the Federal General Conformity Regulation and trigger the need for an additional conformity determination beyond the one proposed for carbon monoxide.	2 through 5, and Mitigated Alternative 5	S	AQ-2: NASA and its partners would schedule construction to ensure that annual emissions of ozone precursors associated with project construction and operation do not exceed a cumulative total of 100 tons per year. This would apply over all years of project construction and operation or until an applicable State Implementation Plan that includes the project emissions is approved by EPA. Implementation of this mitigation is <u>mandatory</u> to comply with the Federal Clean Air Act.	LTS

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AQ-3: Proposed laboratories and disaster training facilities would be a potential source of air pollutant emissions, including emissions of toxic air contaminants.	2 through 5, and Mitigated Alternative 5	S	AQ-3: Prior to the issue of occupancy permits, operators of laboratories and disaster training facilities would be required to consult with the BAAQMD regarding possible permit requirements and emissions reduction equipment and to comply with BAAQMD's requirements.	LTS
AQ-4: Any long-term residential uses located over high concentrations of the Regional Plume would potentially be exposed to levels of air contaminants that present an adverse health risk.	2 through 5, and Mitigated Alternative 5	S	AQ-4: Long-term residential uses would be avoided at areas located over high concentration zones of the Regional Plume in accordance with the Human Health Risk Assessment (HHRA) and EIMP.	LTS
AQ-5: New proposed land uses under the NADP would be exposed to elevated levels of toxic air contaminants associated with the Regional Plume. This exposure could present a health risk.	2 through 5, and Mitigated Alternative 5	S	AQ-5: NASA would review all planned uses in light of the findings of the HHRA to ensure that planned uses would not create unacceptable public health risks. Proposed uses would be moved if unacceptable risks which could not be mitigated to an acceptable level were found.	LTS
AQ-6: Construction emissions of PM ₁₀ associated with new development and renovation of existing facilities would result in potentially unhealthy air pollutant concentrations.	2 through 5, and Mitigated Alternative 5	S	<p>AQ-6a: Measures to control dust generation would reduce this impact associated with PM₁₀ to a level of less-than-significant. The following measures, including all control measures recommended by the BAAQMD, would be incorporated into construction contract specifications and enforced by NASA. These measures include the following provisions:</p> <ul style="list-style-type: none"> — Use reclaimed water on all active construction areas at least twice daily and more often during windy periods. Watering is the single-most effective measure to control dust emissions from construction sites. Proper watering could reduce dust emissions by over 75 percent. — Cover all hauling trucks or maintain at least 0.6 meters (2 feet) of freeboard. Dust-proof chutes would be used as appropriate to load debris onto trucks during any demolition. 	LTS

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			<ul style="list-style-type: none"> — Pave, apply reclaimed water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. — Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas and sweep streets daily (with water sweepers) if visible soil material is deposited onto the adjacent roads. — Hydro seed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas that are inactive for 10 days or more). — Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles. — Limit traffic speeds on any unpaved roads to 25 kilometers per hour (15 mph). — Install sandbags or other erosion control measures to prevent silt runoff to public roadways. — Replant vegetation in disturbed areas as quickly as possible. — Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site. — If necessary, install windbreaks, or plant trees/vegetative windbreaks at the windward side(s) of construction areas. — Suspend excavation and grading activity when winds (instantaneous gusts) exceed 40 kilometers per hour (25 mph) and visible dust emission cannot be prevented from leaving the construction site(s). 	

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			<ul style="list-style-type: none"> — Limit areas subject to disturbance during excavation, grading, and other construction activity at any one time. — Prior to disturbance (or removal) of materials suspected to contain asbestos, lead or other toxic air contaminants, contact the BAAQMD. — NASA would designate an <i>Environmental Coordinator</i> responsible for ensuring that mitigation measures to reduce air quality impacts from construction are properly implemented. This person would also be responsible for notifying adjacent land uses of construction activities and schedule. 	
			<p>AQ-6b: Measures to reduce emissions of nitrogen oxides and particulate matter from diesel fuel combustion during construction should be evaluated and implemented where reasonable and feasible. The following measures would reduce the impacts from construction fuel combustion:</p> <ul style="list-style-type: none"> — Properly maintain construction equipment. This measure would reduce emissions of ROG, NO_x and PM₁₀ by about 5 percent. — Evaluate the use of available alternative diesel fuels and where reasonable and feasible, use alternative diesel fuels. <i>The CARB has verified reductions of NO_x by almost 15 percent, and particulate matter by almost 63 percent, from use of alternative diesel fuels. However, the use of these fuels may not be appropriate for all diesel equipment.</i> — Reduce construction traffic trips through TDM policies and implementation measures. — Reduce unnecessary idling of construction equipment and avoid staging equipment near or upwind from sensitive receptors such as on-site residences or daycare uses. 	

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			— Where possible, use newer, cleaner burning diesel-fueled construction equipment. The <i>Environmental Coordinator</i> would prohibit the use of equipment that visibly produces substantially higher emissions than other typical equipment of similar size.	LTS
AQ-7: Construction emissions associated with new development and renovation of existing facilities would result in potentially unhealthy air pollutant concentrations.	2 through 5, and Mitigated Alternative 5	S	<p>AQ-7a: NASA and its partners would install air pollution devices, for example, particulate traps and oxidation catalysts, on construction equipment to the extent that they are technically feasible.</p> <p>AQ-7b: NASA and its partners would develop and implement a Construction Emissions Mitigation Plan (CEMP) to ensure that the project would comply with the Federal Clean Air Act and further reduce emissions. The plan would include measures and procedures, sufficiently defined to ensure a reduction of nitrogen oxides, PM₁₀, and diesel particulate matter.</p> <p>The CEMP would be developed in consultation with EPA and BAAQMD. The CEMP would be evaluated by NASA and its partners on an annual basis to schedule construction ensuring that emissions of ozone precursors associated with project construction and operation would not exceed 91 tonnes (100 tons) per year and update measures to include new rules or regulations. NASA and its partners would consult with the BAAQMD on an annual basis during project construction to determine if additional air quality mitigations to reduce the project's air quality impact are warranted, and to take such additional air quality mitigation as is appropriate and reasonable, and in an expeditious manner.</p> <p>A CEMP coordinator, who would also act as a "Disturbance Coordinator" would be responsible for ensuring that measures included in the CEMP are implemented. This would be done through field inspections, records review, and investigations of complaints.</p>	LTS

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			At a minimum, the CEMP would include the following measures to reduce emissions from construction activities:	LTS
			<ul style="list-style-type: none"> — Require that all equipment is properly maintained at all times. All construction equipment working on site would be required to include maintenance records indicating that all equipment is tuned to engine manufacturer's specifications in accordance with the time frame recommended by the manufacturer. — All construction equipment would be prohibited from idling more than 5 minutes. — Tampering with equipment to increase horsepower would be strictly prohibited. — Include particulate traps, oxidation catalysts and other suitable control devices on all construction equipment used at the site. — Diesel fuel having a sulfur content of 15 ppm or less, or other suitable alternative diesel fuel, would be used unless such fuel cannot be reasonably procured in the market area. — The CEMP would also ensure that construction-related trips are minimized through appropriate policies and implementation measures. — The CEMP would address the feasibility on a biannual basis of requiring the use of reformulated or alternative diesel fuels. — The CEMP Coordinator (or Environmental Coordinator) would prohibit the use of equipment that visibly produces substantially higher emissions than other typical equipment of similar size. — The staging of three or more pieces of construction equipment near or just upwind from sensitive receptors such as residences or daycare uses would be prohibited. 	

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			<p>AQ7c: The CEMP would address the feasibility of requiring or encouraging the use of “Cleaner” (Lower Emissions) construction equipment on an annual basis. For larger construction projects (i.e. projects greater than 9,290 square meters (100,000 square feet)), a percentage of the equipment would be required to be 1996 or newer. This would be determined as follows:</p> <ul style="list-style-type: none"> — If equipment is leased by the contractor, then the percentage of 1996 or newer equipment would be maximized so that the total cost of leasing equipment would not exceed 110 percent of the average available cost for leased equipment. — If equipment is owned by the Contractor, then the CEMP shall identify the minimum percentage of total horsepower for 1996 or newer equipment that should be used in construction. For the first year of construction, it shall be considered possible that 1996 or newer equipment shall makeup a minimum of 75 percent of the total horsepower, unless NASA and its partners can show the BAAQMD that it is not reasonable. 	
INFRASTRUCTURE				
INFRA-1: Portions of the sanitary sewer conveyance system between Ames Research Center and the SWPCP are already flowing at or near maximum capacity. Under Alternatives 2 through 5, discharge from the development proposed under the NADP would contribute to the existing capacity problems.	2 through 5, and Mitigated Alternative 5	S	INFRA-1: NASA would cooperate with the City of Sunnyvale in determining the cumulative impact of existing and proposed development on the sanitary sewer conveyance system between Ames Research Center and the SWPCP. NASA and its partners would contribute their fair share toward construction of conveyance pipes and supporting infrastructure which are determined to be necessary to mitigate the cumulative impact of existing and proposed development.	LTS
INFRA-2: Under Alternatives 2, 4 and 5, discharge from the western sanitary sewer system would increase. The capacity of the conveyance system between Ames Research Center and the PARWQCP is not adequate for existing flows.	2, 4 and 5, and Mitigated Alternative 5	S	INFRA-2: New conveyance piping would be installed between the area served by the existing lift station at the Mountain View Golf Course and the PARWQCP, with sufficient capacity to accommodate the total expected flow. This would require the installation of roughly 5,486 meters (18,000 lineal feet) of pipe. Development under the NADP would contribute its fair share to the solution to this existing regional problem.	LTS

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INFRA-3: Under Alternatives 2, 4 and 5, discharge from Ames Research Center to the PARWQCP would increase. The plant has sufficient capacity to treat the additional flow. However, the flow for all alternatives would exceed what is specified in the 1993 agreement (which was renewed in 1999) between Ames Research Center and the Plant. NASA does not have a current flow capacity agreement with the City of Mountain View or the PARWQCP. However, NASA has a current wastewater discharge permit with PARWCP.	2, 4 and 5, and Mitigated Alternative 5	S	INFRA-3: The 1993 agreement for flow capacity between the PARWQCP and Ames Research Center and between Mountain View and Ames Research Center would be amended to address the additional flow expected from the project before commencing any development. The agreement with Mountain View would include trigger amounts and a formula for the fair share as identified in INFRA-2.	LTS
SERVICES				
SERV-1: Under Alternatives 2, 4 and 5, and Mitigated Alternative 5, housing development in the Bay View Area would result in an increase in elementary school students that would impact the Mountain View-Whisman School District.	2, 4 and 5, and Mitigated Alternative 5	S	SERV-1: The NADP housing developers would pay the standard Developer Impact Fees to the Mountain View-Whisman School District.	LTS

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HAZARDOUS MATERIALS				
HAZ-1: New construction and demolition required to implement the NADP would establish new land uses and could expose the public or uncontaminated soil or water to existing site contamination.	2 through 5, and Mitigated Alternative 5	S	HAZ-1: NASA's development partners would work with the Remediation Project Manager within the Office of Environmental Services during site planning and would implement the guidelines and recommendations in the Environmental Issues Management Plan (EIMP) to ensure that none of the proposed construction, demolition, and infrastructure improvement projects would expose personnel to unacceptable levels of contaminated soil or groundwater. Where the Remediation Project Manager determined that there would be a possible risk of exposure to people or clean soil or groundwater, the proposed design would be altered to prevent such exposure if feasible. If it were not feasible to avoid exposure, protective measures would be undertaken to minimize the risk of exposure as described in the EIMP.	LTS
HAZ-2: Proposed childcare facilities in the Bay View area could be located near the Mountain View Industrial Park, where some businesses handle hazardous materials. Spills or releases at these businesses could expose children to hazardous air pollution.	2, 4 and 5, and Mitigated Alternative 5	S	HAZ-2: In Alternative 2 and 4, NASA or its partners would locate childcare facilities at least 305 meters (1,000 feet) from the industrial area of Mountain View, which would limit the area in which industries handling hazardous materials would be prohibited. Mitigated Alternative 5 would locate childcare facilities at least 402 meters (1,320 feet) from the industrial area of Mountain View in accordance with City of Mountain View policy.	LTS

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GEOLOGY				
GEO-1: Many of the existing buildings that would be rehabilitated and reused do not meet current seismic safety standards.	2 through 5, and Mitigated Alternative 5	S	GEO-1: All rehabilitation of historic structures within the Shenandoah Plaza Historic District would follow the Guidelines for the Rehabilitation of Historic Structures developed by the Architectural Resources Group for NASA and within the Ames Campus would follow the Secretary of the Interior Guidelines for the rehabilitation of Historic Structures in order to maximize seismic safety while minimizing effects on the integrity of any structure on or eligible for the National Register of Historic Places.	LTS
GEO-2: As is the case throughout the San Francisco Bay Area, new buildings, as well as the employees, residents, and visitors that use them, would be exposed to seismic hazards.	2 through 5, and Mitigated Alternative 5	S	GEO-2: All new buildings at Ames Research Center would be designed to meet the current Uniform Building Code regulations for seismic safety.	LTS
GEO-3: As is the case throughout the Santa Clara Valley, new buildings could be exposed to structural hazards from ground subsidence. Also, because almost all of Ames Research Center sits on silty clay soils, new buildings would be exposed to geotechnical hazards such as differential settlement around buildings, and to cracking and heaving. The maximum height of proposed buildings would depend on several factors, including the depth to pockets of soft/medium stiff clayey soil, the thickness of surficial stiff crust, and the thickness of soft/medium stiff clay.	2 through 5, and Mitigated Alternative 5	S	GEO-3: All new construction would be designed based on geotechnical analyses of proposed sites to determine the structural measures necessary to counter the shrink-swell potential of the soil and the risk of structural damage from ground subsidence.	LTS

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GEO-4: Detailed geotechnical studies have yet to be completed for most of the potential building sites at Ames Research Center. While preliminary studies indicate that it would be possible to safely construct the types of buildings foreseen for all planning areas under any of the alternatives, there may be specific geotechnical hazards on individual sites that require mitigation when construction occurs.	2 through 5, and Mitigated Alternative 5	S	GEO-4: Prior to construction of individual facilities, NASA or its partners would conduct detailed geotechnical investigations of all proposed building sites, and would incorporate the engineering recommendations of these studies into building design and construction.	LTS
BIOLOGY				
BIO-1: Construction vehicles could inadvertently injure or kill individuals of special-status species or migratory birds. Because of the rarity of salt marsh harvest mouse (an endangered species), in particular, construction-related mortality could be a significant impact.	2 through 5, and Mitigated Alternative 5	S	<p>BIO-1: To minimize the potential for injury or death caused by construction vehicles to western burrowing owls or migratory birds in all four planning areas and to salt marsh harvest mice in the Bay View area, the following components would be implemented:</p> <ul style="list-style-type: none"> — As much as possible, construction traffic would not be routed on roads adjacent to habitats where these special-status species occur and would be prohibited from using roads when habitat considerations require it. — Occupied or potential habitat for these species near established routes would be marked as off-limits to construction vehicles. — In the Bay View area, if construction vehicles must travel on roads within approximately 30 meters (100 feet) of occupied or potential habitat, drift fencing would be erected to prevent salt marsh harvest mice from crossing these roads. The drift fencing would be placed so that harvest mice retain access to adjacent upland habitats for use as raftage during high water events. 	LTS

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			<ul style="list-style-type: none"> — All drivers of construction vehicles would be informed of the established vehicle routes and made aware of the importance of avoiding occupied and potential habitat for western burrowing owls and salt marsh harvest mice. — Construction activities would not be allowed to disturb nesting migratory birds. 	
BIO-2: There could be indirect adverse impacts if runoff from construction sites entered adjacent wetlands, decreasing water quality in these wetland communities.	2 and 4	S	<p>BIO-2a: To minimize impacts on wetlands, construction would be avoided in the jurisdictional wetlands along the northern boundary of the Bay View area and within 30 meters (100 feet) of these wetlands. Fill activities and other disturbances would be minimized in jurisdictional wetlands elsewhere and in the Eastside/Airfield area.</p> <p>BIO-2b: A wetland enhancement plan would be developed for the restoration of functions and values of aquatic habitats in and adjacent to the Bay View area and outside of development area. This plan would include provisions to improve the quality of existing wetlands in the Bay View area through removal of invasive non-native plants such as periwinkle and perennial pepperweed. This enhancement plan would be developed in coordination with, and would be approved by, the US Army Corps of Engineers and the Regional Water Quality Control Board prior to implementation of the proposed action.</p> <p>All construction near or adjacent to wetlands would implement standard Best Management Practices to minimize runoff into these sensitive areas. Implementing grading and construction during the driest months of the year (July–October) would reduce the potential for siltation and runoff into surrounding habitats.</p>	LTS

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BIO-3: Further development at Ames Research Center, especially in the Bay View area, could increase the potential for the introduction of additional invasive non-native species as a result of improper selection or handling of landscaping or erosion-control materials. In addition, people using the trails surrounding native habitats could inadvertently spread invasive weed seeds on their clothes or shoes.	2 through 5, and Mitigated Alternative 5	S	BIO-3: Landscaping would be designed with native species (with the possible exception of lawn areas). Invasive plants would not be used in any landscaping. Any imported soil used for landscaping must be certified as weed-free. Similarly, any erosion-control structures that contain hay or other dried plant material (e.g., hay bales) must be certified as weed-free. Any construction equipment operating within 76 meters (250 feet) of jurisdictional wetlands or other sensitive habitats in the Bay View area would be washed with reclaimed water prior to use in this area to remove potential weed seeds. The construction zone would be surveyed periodically by a qualified botanist, so that any infestations of invasive species that establish within the construction zone of the Bay View area can be eradicated before the plants can flower and set seed.	LTS
BIO-4: New development at Ames Research Center would increase the number of employees on-site, with a corresponding increase in the potential for people to release unwanted cats and establish unauthorized feeding stations for feral cats. The populations of feral cats and other predatory species would increase, and with it predation on native species, especially ground-nesting and special-status birds.	2 through 5, and Mitigated Alternative 5	S	<p>BIO-4a: NASA and its partners would institute the following programs and policies to limit increases in predator populations:</p> <ul style="list-style-type: none"> — Prohibit employees from feeding wildlife, including cats. — Institute and enforce a no pets policy in new housing. — Install trash containers that cannot be opened by predator species. — Augment the existing non-native predator control program, which includes humane trapping and removal of feral cats and other non-native predators, including, but not limited to, red fox, skunk, racoons, rats and dogs. — Conduct a public education program about the impacts caused by non-native predators and the need to refrain from feeding feral cats and other wildlife. — A regular construction cleanup crew would be designated to ensure that construction debris and trash do not attract predators or scavengers. — Trap and remove predators, including, but not limited to, red fox, skunk, racoons, rats, feral cats and dogs. 	LTS

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			<p>BIO-4b: Design north and east fences bordering Bay View housing to eliminate movement of potential predators from the housing area to sensitive wildlife areas. The design would include:</p> <ul style="list-style-type: none"> — Burying the bottom portion of the fence at least 46 centimeters (18 inches) below ground level. — Making the fencing grid size small enough to prevent rats from passing through. — Placing roll wire along the top of the fencing to eliminate predators climbing over the fence and to deter avian predators from perching. 	
BIO-5: Building-roosting bats may be disturbed by the demolition and renovation of existing buildings at Ames Research Center.	2 through 5, and Mitigated Alternative 5	S	<p>BIO-5: To avoid impacts to roosting bats, a preconstruction survey of buildings to be demolished or renovated would be conducted by a qualified wildlife biologist in accordance with recommendations of the California Department of Fish and Game. If special-status roosting bats are found, CDFG would be consulted. An avoidance or mitigation plan would be developed and implemented. Avoidance measures could include construction outside of hibernation and maternal roosting time periods (winter), excluding bats from the buildings after they have left the roost to forage at night by closing entrances, and the construction of bat boxes to accommodate displaced bats. If bat boxes are used, NASA would monitor their success.</p>	LTS
BIO-6: An increase in the population at Ames Research Center would increase the amount of refuse that may be disposed of in and around buildings. Wildlife, especially feral cats and non-native predatory species, often forage in trash receptacles where food waste is disposed. This may result in an increase of these species in and around Moffett Field, which would increase predation on native species.	2 through 5, and Mitigated Alternative 5	S	<p>BIO-6: NASA and its partners would use trash receptors that are animal resistant, and will maintain a regular garbage disposal schedule.</p>	LTS

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BIO-7: Lighting along roads and buildings in proposed development areas in the Bay View area may impact wildlife species by disrupting their movements, breeding, or other behaviors.	2, 4 and 5, and Mitigated Alternative 5	S	BIO-7: NASA is conducting a lighting study to determine baseline levels. When feasible, nighttime lighting would be excluded in new development adjacent to high-quality wildlife habitat in the North of Bay View area. The Bay View housing would not be allowed to cause a net increase in lighting in the areas north or east of Bay View. The impacts of necessary lighting would be minimized by using low-glare light sources (e.g., low pressure sodium lighting) mounted on short poles and directed away from native habitats. In addition, light amplification to nearby sensitive areas would be eliminated through directional lighting with baffles, non-reflective tinting on windows, and other mechanisms.	LTS
BIO-8: Removal of one hole of the golf course under Alternatives 2 and 4 would reduce existing habitat area for burrowing owls.	2 and 4	S	BIO-8: This impact would be mitigated by the creation of the burrowing owl preserve in the Eastside/Airfield area, which would be large enough to accommodate up to five pairs of owls. Thus any owls which would be affected by the removal of one hole of the golf course would have sufficient nearby habitat to relocate.	LTS
BIO-9: Development on burrowing owl habitat could cause bird mortality if burrows were destroyed while birds were underground.	2 through 5, and Mitigated Alternative 5	S	BIO-9: NASA would: <ul style="list-style-type: none"> — Protect owl burrows wherever possible through careful site planning and inspection during construction. — Where burrows must be removed, evict owls outside the breeding season via passive relocation based on a plan developed by a qualified owl biologist. — Replace lost burrows outside of the nesting season, before construction begins. Burrows would be replaced at a 3:1 ratio either within the owl preserves or in other suitable on-site habitat areas. — Place a Habitat Conservation Easement over burrowing owl preserves. 	LTS

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BIO-10: While NASA has taken steps to avoid most potential impacts to nesting habitat, new development would result in the loss of owl nesting habitat in NRP Parcels 7 and 8. In addition, development would cause the loss of some foraging habitat, especially in the Bay View area.	2 through 5, and Mitigated Alternative 5	S	<p>BIO-10: NASA and its partners would:</p> <ul style="list-style-type: none"> — Establish a burrowing owl preserve in the NRP area which would prevent impacts to owls currently nesting within the future preserve area, and mitigate impacts to owls that might be disturbed by development on NRP Parcels 7 and 8. Restoration, including the removal of concrete, asphalt and other structures, and enhancement of the preserve in the NRP area sufficient to offset development impacts would occur prior to that development. — Design landscaping in developed areas with low growing native vegetation to enhance owl use. — Minimize the development footprint to the extent possible, and locate new development adjacent to existing development to minimize habitat fragmentation. — Minimize construction impacts on nesting and foraging habitat by restricting the area available for circulation and staging of equipment. — Manage other grassland areas at Ames Research Center to support owls and their prey. 	LTS
BIO-11: There could be short-term disturbances to existing burrows if construction occurred too close to the burrows. There could also be long-term disturbances caused by increased intrusion into nesting areas by new residents, employees, and visitors and their pets.	2 through 5, and Mitigated Alternative 5	S	<p>BIO-11a: In order to minimize short-term disturbances from construction, NASA and its partners would adopt the BOHMP, which recommends the following:</p> <ul style="list-style-type: none"> — Construction near owl habitat would be scheduled outside of breeding season, which typically runs from February 1 to August 31, as much as possible. — Construction would be kept as far from nesting areas as possible. If possible, NASA would maintain a minimum 49-meter (160-foot) buffer around occupied burrows during the non-nesting season, and a minimum 76 meter (250-foot) buffer during the nesting season. 	LTS

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			<ul style="list-style-type: none"> — If it is not possible to maintain these distances, NASA would work with a qualified owl biologist to determine appropriate distances from active burrows, fence burrows off from construction activities, and provide owls the opportunity to move by installing artificial burrows further from construction areas before construction begins. — NASA would work with a qualified owl biologist to find circulation routes, staging areas, and areas for other construction activities that will minimize impacts to owls or their burrows. 	
			<p>BIO-11b: In order to prevent long-term disturbances from increases in population associated with implementation of the NADP, NASA and its partners would:</p> <ul style="list-style-type: none"> — Fence off owl habitat with attractive fencing and low, native shrubs. — Design paths around the perimeter of owl habitat to allow people to see the owls without disturbing them. — Prohibit walkers, bikers, and dogs from moving through the habitat areas. — Use signage to educate people about the owls and their sensitivities. — Monitor habitat areas after construction, and implement further protective measures as needed. — Restrict construction of roads, trails, pathways, and other development from occurring within designated burrowing owl preserves. 	LTS

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BIO-12: Burrowing owls often fly fairly low to the ground, so increases in vehicular traffic as a result of new development would in turn increase the potential for owl/vehicle collisions.	2 through 5, and Mitigated Alternative 5	S	<p>BIO-12: In order to minimize increases in vehicle collisions with burrowing owls, NASA and its partners would :</p> <ul style="list-style-type: none"> — Post 25 MPH speed limits along roads adjacent to owl habitat. — Route traffic away from owl habitat as much as possible, especially at night. — Plan new roads and other transportation corridors away from owl habitat wherever possible. — Monitor traffic impacts to burrowing owls, and implement additional mitigation measures if necessary. 	LTS
BIO-13: Measures to control ground squirrels could negatively impact burrowing owls, which are dependent on the squirrels for a variety of functions.	2 through 5, and Mitigated Alternative 5	S	<p>BIO-13: NASA would:</p> <ul style="list-style-type: none"> — Conduct no squirrel control in the owl preserves, and as little as possible in other owl habitat areas. — Allow squirrels to inhabit areas around new development that will not be used by people. — Work with a qualified owl biologist to develop an eradication plan that minimizes effects on burrowing owls if squirrels must be controlled. 	LTS
BIO-14: New development could decrease the owls' prey base if building managers eliminated the small rodents and insects that form the burrowing owls' prey base in developed areas.	2 through 5, and Mitigated Alternative 5	S	<p>BIO-14: To protect the owls' prey base, NASA would adopt the BOHMP, which recommends the following:</p> <ul style="list-style-type: none"> — Allow small rodent and insect control only directly around buildings. — Forbid the use of biocides adjacent to or within owl habitat. — Limit, or if possible, prohibit the killing of small rodents or insects in the owl preserves, enhanced owl habitat, and any other areas where owls nest or forage. 	LTS

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BIO-15: Proposed new development could increase the population of predators by planting new trees and installing light poles that provide perches for birds of prey, by creating habitat for rodents, and by increasing the population of people, some of whom may feed feral cats.	2 through 5, and Mitigated Alternative 5	S	<p>BIO-15: In order to prevent increased predation, NASA would enforce Mitigation Measure BIO-4, above. In addition, NASA and its partners would:</p> <ul style="list-style-type: none"> — Continue on-going efforts to control non-native predators in conjunction with US Fish and Wildlife. — Limit tree planting along roads or buildings adjacent to owl and other wildlife habitat areas to minimize the increase in available perches for avian predators, and modify other potential perches structurally to discourage predators. — Minimize outdoor lighting posts near burrowing owl and other wildlife habitat to reduce new perches for avian predators. Where lighting is needed for safety reasons, install devices to discourage birds from perching. — Trees in Bay View adjacent to the Western Dikes Marsh would be from the USFWS approved list. — Compensate for increases in predation by eliminating predator perches along and within the boundaries of the Western Diked Marsh, Eastern Diked Marsh and Storm Water Retention Pond. <ul style="list-style-type: none"> " Place roll wire atop all fencing surrounding the eastern and western diked marshes and the storm water retention pond. " Place anti-perch devices on and surrounding the Plant Engineering facilities at the northwest corner of ARC property. " If feasible, remove all landscape features within these areas that provide perches for avian predators. — If possible, avoid the use of rip rap on slopes resulting from fill of the Bay View housing area. If rip rap must be used, it must be small diameter materials that would not create habitat for rodents. — Avoid placing rip rap on existing marsh vegetation. 	LTS

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BIO-16: Alternative 4 would result in the loss of approximately 11 hectares (27 acres) of burrowing owl habitat in the Bay View Area.	4	SU	There is no mitigation measure available for this impact other than reconfiguring the alternative so that it would be more similar to Alternatives 2, 3 and 5. Thus, this impact would be significant and unavoidable for Alternative 4.	SU
BIO-17: Although the measures to reduce impacts to burrowing owls are expected to be sufficient to reduce impacts to less-than-significant levels, there can be no guarantee of this without monitoring of owl populations. If the measures were ineffective and owl populations decreased, a significant impact would occur.	2 through 5, and Mitigated Alternative 5	S	<p>BIO-17a: NASA would monitor the burrowing owl population change at Ames Research Center – including changes in adult and pair numbers, changes in chick production, and general mortality factors – in relation to these parameters as measured for a reference owl population in Santa Clara County over a 3-year period. The reference population would be determined based on population dynamics research conducted by a qualified ecologist.</p> <p>BIO-17b: If the Ames Research Center owl population or chick production (compared to the reference population) experiences a significant drop, either statistically or in the opinion of a qualified owl biologist over a 3-year time period, NASA would implement these further actions:</p> <ul style="list-style-type: none"> — Hire a qualified owl biologist to determine if the population decline is due to human impacts from development in the NADP and to determine the sources of population decline due to development in the NADP. — Implement actions and management activities designed by a qualified owl biologist to mitigate those sources of population decline and to return population levels to pre-NADP development levels. — Continue monitoring owl population dynamics to determine if the mitigation measures have been successful at stabilizing the population and increasing the population to pre-NADP development levels. Measurements would be based on a 3-year time frame. 	<p>LTS</p> <p>LTS</p>

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BIO-18: There could be indirect adverse impacts if runoff from construction sites entered the existing storm drain system and the Storm Water Retention Pond.	2 through 5, and Mitigated Alternative 5	S	BIO-18: Potentially contaminated runoff would be managed using stormwater BMPs. Swales would be constructed adjacent to wetlands in upland areas to intercept and filter any runoff before it reaches the wetland. Construction of swales would be permitted within the buffer zone around wetlands, but not within the wetlands themselves.	LTS
BIO-19: There could be indirect adverse impacts if runoff from construction sites entered adjacent wetlands, decreasing water quality in these wetland communities.	5, and Mitigated Alternative 5	S	BIO-19: To minimize impacts on wetlands, construction would be avoided in the jurisdictional wetlands along the northern boundary of the Bay View area and within the buffer zone of these wetlands. Fill activities and other disturbances would be avoided in jurisdictional wetlands elsewhere in the Eastside/Airfield area.	LTS
NOISE				
NOISE-1: Buildout of the NADP would potentially expose new land uses in the Bay View, NRP, and Ames Campus areas to existing noise sources at levels exceeding those considered normally acceptable for the intended use. Buildings 19 and 20, which are proposed for housing in Mitigated Alternative 5, would be in the 70 to 75 dB and 65 to 70 dB noise exposure areas, respectively.	2 through 5, and Mitigated Alternative 5	S	NOISE-1a: For development on NRP Parcels 2, 4, 9, 10, 11, 12, 12a and 16, and the Ames Campus, noise mitigation measures, including site planning to protect noise sensitive outdoor activity areas and building sound insulation treatments to protect noise sensitive indoor spaces, would be included in project design and development. Buildings would be designed to provide an appropriate Noise Level Reduction (NLR) depending upon the designated uses of the sensitive spaces. NOISE-1b: Residential development proposed on Parcels 6, 12 and 12a would be designed so as to achieve an indoor DNL of 45 dB or less. The housing would be provided with forced-air mechanical ventilation or air-conditioning as necessary to achieve a habitable interior environment with the windows closed.	LTS
NOISE-2: Buildout of the NADP would potentially expose new land uses in the Bay View area to existing noise sources at levels exceeding those considered normally acceptable for the intended use.	2, 4 and 5, and Mitigated Alternative 5	S	NOISE-2a: For development on parcels in the Bay View area near the OARF, noise mitigation measures including site planning to protect noise sensitive outdoor activity areas and building sound insulation treatments to protect noise sensitive indoor spaces would be included in project design and development. Buildings would be designed to provide an appropriate Noise Level Reduction (NLR) depending upon the designated uses of the sensitive spaces.	LTS

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<p>NOISE-2b: Once development occurs in the Bay View area, NASA would operate the OARF so that noise generated by it would not exceed the following levels when measured on any residential property:</p> <table> <tr> <td></td> <td>L_{max}</td> <td>$L_{eq-hour}$</td> </tr> <tr> <td>Daytime (7 am - 10 pm)</td> <td>70</td> <td>50</td> </tr> <tr> <td>Nighttime</td> <td>65</td> <td>45</td> </tr> </table>						L_{max}	$L_{eq-hour}$	Daytime (7 am - 10 pm)	70	50	Nighttime	65	45
	L_{max}	$L_{eq-hour}$											
Daytime (7 am - 10 pm)	70	50											
Nighttime	65	45											
AESTHETICS													
AES-1: The lack of design guidelines, height limits, and setback requirements for the Bay View, Ames Campus, and Eastside/Airfield areas could allow future development to create too stark a contrast in terms of height, density, or architectural style.	2, 4 and 5, and Mitigated Alternative 5	S	AES-1: NASA and its partners would develop design guidelines for the Bay View, Ames Campus and Eastside/Airfield areas in order to ensure that new buildings would stylistically complement the existing buildings in the Ames Campus and Eastside/Airfield. Design guidelines for the Bay View area would include setback requirements for Stevens Creek and Western Diked Marsh, and would ensure harmonious design.	LTS									
AES-2: The allowed four- to six- -story height of proposed student apartments on NRP parcel 6 could conflict with the prevailing low heights in the adjacent Berry Court Military Housing area.	2 through 5, and Mitigated Alternative 5	S	AES-2: This parcel is not large enough to hold a sufficient number of housing units if allowed heights were reduced. The visual effect would be mitigated through a combination of landscaping, screening and overall design.	LTS									
AES-3: Proposed new parking structures along the Highway 101 frontage and new four- to five- story buildings around Ellis Circle could block views into and across Ames Research Center from areas across Highway 101 in Mountain View, especially the existing view corridor along Whisman Street.	2 through 5, and Mitigated Alternative 5	S	AES-3: In order to prevent the obstruction of key views of the hangars and the wind tunnels in Ames Research Center from the areas of Mountain View and Sunnyvale across Highway 101, buildings in the NRP area would be carefully sited to preserve view corridors through the new development, especially from the Whisman Street corridor.	LTS									

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AES-4: New development in the Bay View area could block views from the Ames Campus area into the wetlands area in North of Bay View and to the salt ponds beyond.	2, 4 and 5, and Mitigated Alternative 5	S	AES-4: As the site plan for new development in the Bay View area was developed, NASA and its partners would design the new street layout to preserve view corridors through the new development to the North of Bay View area and the salt ponds.	LTS
AES-5: New development in the Bay View area could block views from the Stevens Creek Trail of the historic hangars and the San Francisco Bay.	2,4 and 5, and Mitigated Alternative 5	S	AES-5: NASA and its partners would use site layout to preserve view corridors from the Stevens Creek Trail through new development in Bay View to the historic hangars and to the San Francisco Bay.	LTS
AES-6: Proposed development within the Ames Campus area under Alternative 5, in the NRP area under Alternatives 2 through 5 and in the Eastside/Airfield area under Alternatives 2 and 4 could require the removal of protected trees.	2 through 5, and Mitigated Alternative 5	S	AES-6a: Where possible, NASA and its partners would carefully site any development so as to preserve the protected trees. AES-6b: Where it is not possible to preserve protected trees in place, NASA and its partners would develop a revegetation plan consistent with the requirements of the Santa Clara County Tree Preservation and Removal Ordinance.	LTS
RECREATION				
REC-1: Alternatives 2 through 4 would not supply enough new recreational space to meet demands generated by new employees and residents.	2 through 4	S	REC-1: NASA and/or its partners would develop additional active recreation areas in development areas on- the ARC site to meet recreation demands generated by new employees and residents.	LTS
REC-2: Alternatives 2 and 4 would result in removal of one hole from the golf course to accommodate the Regional Disaster Training Center.	2 and 4	S	REC-2: The golf course would be reconfigured to accommodate a full 18 holes.	LTS

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CULTURAL RESOURCES				
CUL-1: Construction activities could disturb lost or undiscovered subsurface archaeological resources on the site.	2 through 5, and Mitigated Alternative 5	S	<p>CUL-1: In the event that human remains and/or cultural materials are found in the process of implementing the NADP, all project-related construction would cease within a 15 meter (50-foot) radius in order to proceed with the testing and mitigation measures required pursuant to Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code of the State of California. The State Historic Preservation Officer and the NASA Federal Preservation Officer would be contacted as soon as possible. Construction in the affected area would not resume until the regulations of the Advisory Council on Historic Preservation (36 CFR Part 800) have been satisfied.</p> <p>In the event of the discovery of human remains, the Santa Clara County Coroner would be notified by the project manager. The Coroner would make the determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his or her authority, s/he would notify the Native American Heritage Commission, who would attempt to identify the descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to State law, then the remains would be reinterred with items associated with the Native American burial on the property in a location not subject to further disturbance.</p>	LTS

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CUL-2: Rehabilitating existing historic structures could significantly impact their integrity.	2 through 5, and Mitigated Alternative 5	S	<p>CUL-2a: Any project that involves the rehabilitation of contributing buildings within the Shenandoah Plaza Historic District would follow the Historic Resource Protection Plan. Appropriate landscaping would be used to avoid impact to historic buildings. The Historic Resources Protection Plan includes the guidelines for Rehabilitation of Historic structures prepared for NASA by Architectural Resources Group, and the Reuse Guideline for Hangar 1, prepared by Page and Turnbull, which comply with the Secretary of the Interior's Standards. New additions would be located on secondary facades. Restoring facades that have been previously altered would be considered as an alternative.</p> <p>CUL-2b: The State Historical Building Code would be used when planning for structural stability or the installation of protective or code required mechanical systems or access.</p> <p>CUL-2c: Design guidelines for the historic structures would be modified to include:</p> <ul style="list-style-type: none"> — Replacement glass would be with like kind. — No change of exterior material would occur. — Installation of utilities would not affect historic character defining features. — New materials would not affect the historic integrity of original materials. — Ground disturbing activities would match materials in-kind. 	LTS

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CUL-3: Infill development within the Shenandoah Plaza Historic District could threaten the District's visual integrity.	2 through 5, and Mitigated Alternative 5	S	<p>CUL-3a: Any new building or addition to an existing building constructed within the portion of the Shenandoah Plaza Historic District that lies within Ames Research Center would follow the Historic Resources Protection Plan, which includes the Design Guidelines for New Construction in the Shenandoah Plaza Historic District prepared for NASA by Architectural Resources Group (ARG). These guidelines set parameters for compatible designs including orientation, height, setback, materials and style. The guidelines also indicate which areas must not be used as building sites.</p> <p>CUL-3b: Any project undertaken within the vicinity of designated or potentially-designated resources, structures or districts would be subject to review by the State Historic Preservation Officer through the Section 106 process of the National Historic Preservation Act. Any agreed upon mitigation, such as plan modification and design harmony, would be undertaken.</p>	LTS
SOCIO-ECONOMICS				
SOCIO-1: Alternatives 2 through 5 would generate one percent or more of the new households in the Housing Impact Area between 2000 and 2015 and contribute to the regional jobs-housing imbalance.	2 through 5	S	SOCIO-1a: NASA will continue to attempt to acquire the rights to occupy as much of the Department of Defense (DOD) housing located at Moffett Field as possible to bolster the projected supply provided under each of the alternatives.	SU

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Significant Impact	Applicable to Alternative(s)	Significance Before Mitigation	Mitigation Measures	Significance With Mitigation
	Mitigated Alternative 5		<p>SOCIO-1b: In the Mitigated Alternative 5, NASA would require the provision of 1,120 townhome and apartment units in the Bay View area, and 810 student apartment and dormitory units in the NRP area. If this level of housing development could not be achieved, NASA would commensurately scale back the employment and student generating components of the project.</p> <p><i>The provision of these units could have the potential to create secondary impacts in the areas of traffic, air quality, infrastructure, services, noise and fiscal impact. These impacts are discussed in detail in Chapter 5. The analysis of these potential impacts concludes that there would be no significant impacts beyond those disclosed in the DPEIS. In fact, traffic impacts would be lessened. Infrastructure, service, and fiscal impacts would be mitigated through the payment of fair share contributions to sewer infrastructure and through Developer Impact Fees to offset impacts to schools, libraries and recreational programs in the City of Mountain View. Although residential uses in Building 20 would be within a 70dB noise exposure contour, this is considered conditionally acceptable by HUD and California Planning Guidelines, although not by Santa Clara County. Building 19 would be in a noise exposure area of 70 to 75 dB, which is above California Planning Guidelines conditionally acceptable levels, but is still conditionally acceptable to HUD. These noise impacts would be mitigated to less than significant levels.</i></p> <p>SOCIO-1c: NASA would continue to evaluate the possibility of constructing housing above retail uses proposed in the NRP area.</p> <p>SOCIO-1d: NASA would require at least 10 percent of the on-site housing to be affordable to low income households.</p>	
SOCIO-2: Alternative 3 would generate a net negative fiscal impact on the City of Mountain View, due in particular to increased demands on recreational and library facilities.	3	S	SOCIO-2: NASA, in collaboration with its Partners, would provide on-site library and recreation facilities. These would include community rooms within the residential portions of the project, an on-site fitness center, and reading rooms and libraries as part of the University-related uses.	LTS

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SOCIO-3: Under Alternatives 2, 4, 5, and Mitigated Alternative 5, increases in costs generated by ARC high-school students could exceed 0.5 percent of the Mountain View-Los Altos Union High School District annual revenue limit.	2, 4, 5 and Mitigated Alternative 5	S	SOCIO-3: NASA and the Mountain View-Los Altos Union High School District will negotiate an agreement whereby in any given year, should the Mountain View-Los Altos Union High School District's per student operating revenues decrease below a pre-determined baseline as a direct result of enrollment generated by the NADP, NASA or its partners will compensate the District for the shortfall associated with these students. The baseline would be set to the District's per student operating revenues in the year prior to when students residing at ARC first begin attending classes in the District, and would be adjusted for cost of living and inflationary changes over time.	LTS

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TABLE 0-2 **SUMMARY OF SIGNIFICANT UNAVOIDABLE IMPACTS FOR
EACH ALTERNATIVE**

Significant Impact	Alternative				
	1	2	3	4	5
CIR-1		X	X	X	X
CIR-4				X	
CIR-5		X		X	
AQ-1		X	X	X	X
BIO-16				X	
SOCIO-1		X	X	X	X

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